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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,399

06/20/2005

Tsuyoshi Kashima

885A.0003.U1(US)

4399

29683 7590 07/10/2008
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EXAMINER

CASCA, FRED A

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

07/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/500,399

Applicant(s)

KASHIMA, TSUYOSHI

Examiner

FRED A. CASCA

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's amendment filed on March 18, 2008. Claims 1-29 are still pending in the present application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 13 and 22 recite the limitation "the distance" in the last line of the claims. There is insufficient antecedent basis for this limitation in the claim.

Independent claims 3 and 24 recites the limitation "the total node number" in line 13 of claim 3 and line 10 of claim 24. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in

the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Independent claims 1, 3, 13, 22 and 24 recite the limitation, “estimating a distance on the basis of the ratio.” There is insufficient explanation of how to estimate a distance between a mobile node and non-mobile node based on a ratio of two sets of node in different regions. Figures 1-3 of the specification has figures of the regions where the nodes would be. However, the explanations of these figures with reference to estimating the distance are not sufficient to make a person of ordinary skill in the art understand how the distance based on the ratio of numbers nodes in different regions obtained. It is not clear how the distance is estimated based on the numbers of nodes in different regions. Without additional guidance, there would be undue experimentation as to how to estimate the distance based solely on the ratio of the number of nodes in different region.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 8-14, 18-25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chheda et al (US 5,946,621) in view of Petty et al (US 6,308,073 B1).

Referring to claim 1, Chheda discloses a method (abstract) specifying, as a candidate node, a node present within a communication zone of a mobile node (col. 1, lines 45-65, col. 2, lines 14-24, “determining the point at which a sector can communicate acceptably with the mobile unit”); calculating, for each specified candidate node, the number of nodes present within a first region where the communication zone of the mobile node and a communication zone of the candidate node overlap each other (Figures 2-4, col. 9, lines 14-60, “combine individual neighbor sets”, “B=number combined rank of neighbor X”, “neighbors that are also candidate or active set members”),

and the number of nodes present within a second region defined by the communication zone of the candidate node which does not overlap the communication zone of the mobile node (Figure 1, “base station”, “B1”), and estimating distance between nodes (Figures 1-2, and col. 1, lines 22-65, note that estimating distance is inherent in CDMA and other wireless networks especially during the handoff process).

Chheda fails specifically disclose estimating the distance in the format claimed by the applicant.

Petty discloses a system for locating a remote mobile station within an area of a wireless communication system by estimating mobile terminal distances relative neighbor base stations (col. 2, figures 1-3 and 5, and lines 30-57, “to calculate distances to the respective bases stations).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Chheda by incorporating the teachings of Petty and consequently providing calculating distance based on the ratio as claimed by applicant, for the purpose of providing a more accurate distance estimation.

Referring to claim 2, the combination of Chheda/Petty disclose the node selecting method according to claim 1, characterized in that the mobile node further executes a fourth step of selecting a node for next communication, on the basis of the estimated distance (Chheda, col. 1, lines 42-56, “handoff”).

Referring to claim 3, Chheda discloses a method (abstract and Figures 1-3), specifying a node present within a communication zone of a mobile node (col. 1, lines 45-65, col. 2, lines 14-24, “determining the point at which a sector can communicate acceptably with the mobile unit”); specifying a designated node out of neighbor nodes (figures 1-5 and col. 1, lines 42-56, “handoff”); specifying a next neighbor node present within a communication zone of the designated node (col. 1, lines 42-56, “handoff”);

counting a common node number as the number of nodes common to the neighbor node and the next neighbor node (Figures 2-4, col. 9, lines 14-60, “combine individual neighbor sets”, “B=number combined rank of neighbor X”, “neighbors that are also candidate or active set members”); counting a non-common node number resulting from a subtraction of the common node number from the total node number of the nodes of the neighbor node and the next neighbor node (figures 1, “base station”, “B1”), and

estimating a distance between the mobile node and the designated node (Figures 1-2, and col. 1, lines 22-65, note that estimating distance is inherent in CDMA and other wireless networks especially during the handoff process).

Chheda fails specifically disclose estimating the distance in the format claimed by the applicant.

Petty discloses a system for locating a remote mobile station within an area of a wireless communication system by estimating mobile terminal distances relative neighbor base stations (col. 2, figures 1-3 and 5, and lines 30-57, “to calculate distances to the respective bases stations).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Chheda by incorporating the teachings of Petty and consequently providing calculating distance based on the ratio as claimed by applicant, for the purpose of providing a more accurate distance estimation.

Referring to claim 4, the combinations of Chheda/Petty disclose the node selecting method according to claim 3, characterized in that the mobile node further executes a seventh step of selecting a node for next communication, on the basis of the estimated distance (Chheda, col. 1, lines 42-56, “handoff”).

Referring to claim 8, the combinations of Chheda/Petty disclose the node selecting method according to claim 1, and further disclose characterized in that neighbor node lists are compared with each other in relation to all nodes present within each region; even a plurality of nodes are counted as one if the plurality of nodes have the same neighbor node list; and the

number thus counted is used as the modified number of nodes of the region (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25).

Referring to claim 9, the combinations of Chheda/Petty disclose the node selecting method according to claim 1, and further disclose characterized in that the mobile node executes the first to third steps at predetermined periods (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25, col. 9, lines 14-60).

Referring to claim 10, the combinations of Chheda/Petty disclose the node selecting method according to claim 3, characterized in that the mobile node executes the first to sixth steps at predetermined periods (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25, col. 9, lines 14-60).

Referring to claim 11, the combinations of Chheda/Petty disclose the node selecting method according to claim 9, characterized in that the predetermined period is changed in accordance with a movement speed of the mobile node (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25, col. 9, lines 14-60).

Referring to claim 12, the combinations of Chheda/Petty disclose the node selecting method according to claim 9, characterized in that the predetermined period is changed in accordance with an arrangement density of the plurality of nodes (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25, col. 9, lines 14-60).

Referring to claims 13-14 and 18-21, claims 13-14 and 18-21 recite features analogous to the features of claims 1-2 and 8-11, thus the combination of Chheda/Petty disclose all elements of claims 13-14 and 18-21 (see the rejection of claims 1-2 and 8-11 above).

Referring to claims 22-23, claims 22-23 recite features analogous to the features of claims 1-2, thus the combination of Chheda/Petty disclose all elements of claims 22-23 (see the rejection of claims 1-2 above).

Referring to claims 24-25 and 29, claims 24-25 and 29 recite features analogous to the features of claims 1-2 and 8, thus the combination of Chheda/Petty disclose all elements of claims 24-25 and 29 (see the rejection of claims 1-2 and 8 above).

Response to Arguments

8. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper, can be reached at (571) 272-7605. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/VINCENT P. HARPER/
Supervisory Patent Examiner, Art Unit 2617